

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCRRORY, CHIEF

MONTHLY NEWS LETTER

WASHINGTON, D.C., JULY 20, 1925.

THE NEW FISCAL YEAR IS JUST BEGINNING AND AT THIS TIME I DESIRE TO CALL YOUR ATTENTION TO THE NECESSITY OF CONDUCTING OUR WORK AS ECONOMICALLY AS POSSIBLE. AT THE LAST ANNUAL BUSINESS MEETING OF THE GOVERNMENT, PRESIDENT COOLIDGE STRESSED THE NECESSITY OF REDUCING GOVERNMENT EXPENSES IF TAXES WERE TO BE FURTHER REDUCED AND POINTED OUT THAT IT WAS THE DUTY AND THE PRIVILEGE OF ALL OF US TO COOPERATE IN THIS EFFORT.

THE WORK THAT IS INTRUSTED TO US TO DO MUST GO AHEAD BUT EACH OF US SHOULD PLAN TO MAKE THE MOST EFFECTIVE USE POSSIBLE OF OUR TIME, AND TO BE AS ECONOMICAL AS POSSIBLE IN THE USE OF SUPPLIES AND IN INCURRING EXPENSES IN THE PROSECUTION OF THE WORK. IF RIGID ECONOMY IS PRACTICED BY ALL IT SHOULD BE POSSIBLE TO PROPERLY CARRY ON THE WORK OF THE DIVISION AND AT THE SAME TIME TO MEET THE PRESIDENT'S WISHES IN HAVING SOMETHING LEFT TO TURN BACK TO THE TREASURY AT THE END OF THE YEAR.

S. H. McCRRORY

DRAINAGE

AFTER THE MEETING OF THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS AT MADISON, Wis., D.G. MILLER AND P.C. McGREW MADE AN INSPECTION OF CONCRETE SAMPLES SUBMERGED IN MEDICINE LAKE NEAR WATERTOWN, S.D. THE WATER OF THIS LAKE HAS A VERY HIGH ALKALI CONTENT AND A LARGE NUMBER OF SAMPLES OF CONCRETE HAVE BEEN SUNK IN IT FOR THE PURPOSE OF OBSERVING THE EFFECT OF THIS WATER ON CONCRETE CURED UNDER VARIOUS CONDITIONS. ON THIS TRIP MESSRS. MILLER AND McGREW WERE ACCCOMPANIED BY S. H. McCRRORY AND H.H. BARROWS.

O.E. RAMSER RECENTLY VISITED THE CACHE RIVER DRAINAGE DISTRICT IN SOUTHERN ILLINOIS FOR THE PURPOSE OF ADVISING THE DISTRICT OFFICIALS WITH REGARD TO ESTABLISHING INSTRUMENTS FOR MEASURING THE RUN-OFF ON THE DISTRICT. THIS DIVISION WILL FURNISH SOME INSTRUMENTS FOR THIS PURPOSE AND THE RECORDS WILL BE TAKEN UNDER THE SUPERVISION OF THE DISTRICT'S ENGINEER. THE CACHE RIVER DISTRICT WAS REPORTED ON BY D. L. YARNELL SEVERAL YEARS AGO.

GEO. A. MITCHELL HAS BEGUN AN INVESTIGATION OF THE POSSIBILITIES OF IMPROVING THE SEWAGE DISTRIBUTION ON LAND OF THE STATE INSTITUTIONS AT VINELAND, N.J., AND A STUDY OF THE AMOUNT OF WATER REQUIRED AND RESULTS OBTAINED FROM SPRAY AND SURFACE IRRIGATION ON CERTAIN OTHER TRACTS IN NEW JERSEY.

F.E. STAEBNER VISITED JOHN G. SUTTON AT FRANKLIN, La., AND WENT OVER THE WORK BEING DONE IN CONNECTION WITH THE IRRIGATION OF SUGAR CANE. MR. STAEBNER HAS JUST COMPLETED A PROGRESS REPORT ON THE WORK AT FRANKLIN TO DATE.

A.O. KAY HAS RECENTLY MADE ANOTHER MEASUREMENT OF THE SUBSIDENCE OF DRAINED MUCK SOILS IN THE EVERGLADES SECTION OF FLORIDA. THESE MEASUREMENTS HAVE BEEN MADE AND RECORDED PERIODICALLY FOR A NUMBER OF YEARS.

D.L. YARNELL WILL BEGIN SHORTLY A REPORT OF THE RESULTS OF TESTS OF DIFFERENT TYPES OF CURRENT METERS, MR. McCORMICK VISITED MR. YARNELL AT IOWA CITY UPON HIS RETURN FROM HIS TRIP TO MADISON, Wis.

R.D. MARSDEN IS IN NORTHERN IOWA IN CONNECTION WITH HIS FIELD STUDY OF THE RELATIVE ECONOMY OF LARGE TILE AS AGAINST OPEN DITCHES. HE WILL BE IN THE FIELD AT LEAST UNTIL AUGUST 1.

IRRIGATION

W.W. McLAUGHLIN AND A.T. MITCHELSON HAD AN OPPORTUNITY OF MEETING SECRETARY JARDINE AT THE DEPARTMENT CONFERENCE HELD IN SAN FRANCISCO RECENTLY AT WHICH 200 EMPLOYEES OF THE DEPARTMENT LOCATED IN THAT VICINITY WERE PRESENT. H.F. BLANEY ATTENDED A SIMILAR CONFERENCE AT LOS ANGELES.

COOPERATIVE AGREEMENTS FOR THE FISCAL YEAR 1926 BETWEEN THE DIVISION AND INSTITUTIONS IN CALIFORNIA, COLORADO, NEVADA, NEW MEXICO, OREGON AND UTAH HAVE BEEN SUBMITTED TO THE WASHINGTON OFFICE FOR APPROVAL. SIMILAR AGREEMENTS COVERING WORK IN IDAHO AND TEXAS ARE IN PREPARATION. W.W. McLAUGHLIN WAS IN SACRAMENTO EARLY IN JUNE IN CONSULTATION WITH THE STATE DEPARTMENT OF ENGINEERING RELATIVE TO THE COOPERATIVE AGREEMENT FOR THE NEXT FISCAL YEAR. R.G. HEMPHILL ALSO HAD A CONFERENCE RECENTLY WITH THE BOARD OF WATER ENGINEERS AT AUSTIN, TEXAS, REGARDING THE COOPERATIVE WORK FOR THE COMING YEAR IN THAT STATE.

L.M. WINSOR REPORTS THAT AN AGREEMENT HAS BEEN REACHED BY THE GOOSEBERRY AND COTTONWOOD IRRIGATION COMPANIES TO ISSUE ONE CLASS OF STOCK RATHER THAN TWO AND TO ISSUE SHARES OF THIS SINGLE CLASS IN EXCHANGE FOR STOCK OF THE TWO OLDER COMPANIES AT ADJUSTED VALUATION.

MR. WINSOR ATTENDED A MEETING NEAR WILLARD, UTAH, ON JUNE 8, CALLED FOR THE PURPOSE OF ARRANGING FOR THE COMPLETION OF THE GRAVEL CONTROL WORK AT THAT POINT. THE SUM OF \$1500 WAS PLEDGED BY VARIOUS INTERESTED PARTIES TO BE EXPENDED UNDER THE IMMEDIATE SUPERVISION OF E.O. NORR, MR. WINSOR'S ASSISTANT.

A PROJECT IS UNDER WAY IN UTAH TO STUDY THE WINTER INJURY TO PEACH TREES AS RELATED TO IRRIGATION AND ANOTHER TO DETERMINE THE RETURN SEEPAGE WATER OF BEAR RIVER.

R.A. HART AND L.T. JESSUP ATTENDED THE NINTH ANNUAL MEETING OF THE WESTERN SOCIETY OF PLANT NUTRITION AND SOIL MANAGEMENT AT PORTLAND, ORE. MR. HART READ A PAPER ON "FIELD EXPERIENCES IN THE RECLAMATION OF ALKALI LAND".

A PROJECT HAS BEEN AUTHORIZED IN OREGON IN COOPERATION WITH THE OREGON AGRI. COLLEGE, ON METHODS AND COST OF APPLYING WATER IN IRRIGATION.

COOPERATIVE ALKALI RECLAMATION EXPERIMENTS WERE STARTED IN JUNE ON A TRACT NEAR CALDWELL, IDAHO.

J.C. MARR SPENT TWO DAYS AT NEW PLYMOUTH, IDAHO, AT THE REQUEST OF LAND OWNERS OF TWO DRAINAGE DISTRICTS, DURING WHICH TIME CONTROVERIES BETWEEN THE TWO DISTRICTS WERE ARBITRATED, THUS CLEARING THE WAY FOR IMMEDIATE DRAINAGE WORK.

W. A. HUTCHINS SPENT MOST OF THE MONTH IN NEVADA AND UTAH IN CONNECTION WITH A STUDY OF MUTUAL IRRIGATION COMPANIES.

A. L. FELLOWS INSPECTED THE NEWLY DEVELOPED WHITNEY IRRIGATION DISTRICT IN DAWES COUNTY, NEBRASKA, AND COOPERATED WITH THE EXTENSION AGENT OF THE UNIVERSITY OF NEBRASKA IN HOLDING A TWO DAYS' FARMERS' SCHOOL OF INSTRUCTION ON IRRIGATION AND SOILS.

R.A. HART MADE A TRIP TO BANIDA, IDAHO, ON DRAINAGE PROJECT ACTIVITIES.

F.C. SCOBAY MADE TESTS OF THE FLOW OF WATER IN PIPES FOR THE MUNICIPAL SUPPLY OF DENVER UNDER A COOPERATIVE PROJECT.

A.T. MITCHELSON MADE A TRIP TO THE DURHAM LAND SETTLEMENT COLONY OF CALIFORNIA TO OBTAIN INFORMATION FOR P.A. EWING ON THE COST OF RECLAIMING FARMS. LATER HE CONFERRED WITH H.F. BLANEY AT LOS ANGELES REGARDING FUTURE COOPERATIVE POLICIES.

AN IMPROVEMENT IN CURRENT METER APPARATUS HAS BEEN DESIGNED BY E.J. HOFF TO PREVENT THE LOSS OF METER TAILS IN SWIFT CURRENTS. THIS APPLIANCE HAS BEEN SENT TO VARIOUS POINTS WHERE METERS ARE IN USE.

A SERIES OF TESTS IS BEING CONDUCTED BY R.L. PARSHALL AT THE BELLVUE HYDRAULIC LABORATORY, COLORADO, ON THE DESIGN OF A NEW DIVISOR, THE PURPOSE OF WHICH IS TO DIVIDE A STREAM IN ANY DESIRED RATIO. ITS PRACTICAL APPLICATION LIES IN DIVIDING A STREAM AMONG USERS ACCORDING TO THE NUMBER OF SHARES IN THE CANAL WATER HELD BY EACH. AN ATTEMPT WILL BE MADE TO EVOLVE A DIVISOR IMMUNE FROM THE EFFECT OF VELOCITY OF APPROACH AND UPPER HEAD AS WELL AS FROM VARIATIONS OF THE ELEVATION OF THE WATER BELOW THE STRUCTURE.

RURAL ENGINEERING

M.C. BETTS HAS RETURNED FROM A TRIP THROUGH NEW ENGLAND AND CANADA DURING WHICH HE COLLECTED DATA ON POTATO STORAGE HOUSES. WITH THE INFORMATION IN HAND IT IS PLANNED TO MAKE A STUDY TO DETERMINE THE ACTUAL CONDITIONS EXISTING IN SUCH STRUCTURES AND THEN TO SUGGEST NEEDED IMPROVEMENTS.

ILLUSTRATIONS ARE BEING PREPARED FOR TWO BULLETINS TO BE ISSUED BY THE BUREAU OF ANIMAL INDUSTRY, ONE ON THE SUBJECT OF "HOG HOUSES" AND THE OTHER ON "HOG RAISING EQUIPMENT".

EXPERIMENTS ARE STILL IN PROGRESS ON THE DISTRIBUTION OF FERTILIZERS. THIS WORK IS UNDER THE DIRECTION OF M.A.R. KELLEY AT THE ARLINGTON EXPERIMENT FARM.

IN THE FUEL BURNING TESTS BEING CONDUCTED BY A.H. SENNER AND W. R. HUMPHREYS AT THE ARLINGTON EXPERIMENT FARM, TWO ADDITIONAL TYPES OF OIL BURNERS HAVE BEEN TESTED DURING THE PAST MONTH.

DISTRIBUTION OF SURPLUS WAR EXPLOSIVES

GEO. R. BOYD HAS DEVOTED CONSIDERABLE TIME RECENTLY TO THE PREPARATION OF AN EDUCATIONAL FILM ON THE HANDLING AND USE OF EXPLOSIVES. THIS IS BEING MADE BY THE DEPARTMENT MOTION PICTURE LABORATORY AND WILL BE DISTRIBUTED BY THE DEPARTMENT. RECENTLY PICTURES WERE TAKEN AT BALTIMORE AND AT THE REPUBLIC PLANT OF THE DUPONT COMPANY AT GIBBSTOWN, N.J., SHOWING THE TRANSPORTATION OF HIGH EXPLOSIVES BY TRUCK AND THE LOADING INTO TRUCKS AND CARS. PICTURES HAVE BEEN TAKEN IN VIRGINIA AND MICHIGAN ILLUSTRATING THE HANDLING AND USE OF EXPLOSIVES IN THE FIELD FOR LAND CLEARING WORK.

PERSONAL NOTES

W.L. STOCKWELL HAS BEEN TRANSFERRED FROM FORT COLLINS, COLORADO TO LAS VEGAS, NEVADA, WHERE HE WILL STUDY THE DEVELOPMENT OF UNDERGROUND WATER SUPPLY UNDER THE DIRECTION OF F.L. BIXBY.

THE FURLough OF CARL ROHWER HAS BEEN EXTENDED FROM JUNE 16 TO SEPTEMBER 16 BECAUSE OF HIS CONTINUED ILL HEALTH.

E.G. GRAU, PROPERTY CLERK, IS UNDER TREATMENT AT WALTER REED HOSPITAL. HE WILL REMAIN THERE AT LEAST TWO WEEKS LONGER.

G.M. WARREN HAS LEFT FOR A 3 WEEK'S VACATION.

C.D. KINSMAN HAS BEEN APPOINTED A MEMBER OF THE SPRAY MACHINE COMMITTEE OF THE FEDERAL SPECIFICATIONS BOARD.

PUBLICATIONS AND REPORTS

THE FOLLOWING MIMEOGRAPHED REPORTS HAVE RECENTLY BEEN ISSUED:

FLUCTUATION OF THE GROUND WATER AND ITS EFFECT ON FARM DITCH DESIGN IN THE PEAT AND MUCK SOILS OF THE EVERGLADES, BY A.O. KAY.
THE OVERFLOWED LANDS ON MISSISSIPPI RIVER, ETC., BY R. D. MARSDEN AND FRED F. SHAFER.

PROGRESS REPORT ON RUN-OFF FROM DRAINAGE DITCHES IN CENTRAL ILLINOIS, BY C.E. RAMSER AND R. A. NORTON.

PROGRESS REPORT ON RUN-OFF INVESTIGATIONS IN BOLIVAR AND WASHINGTON COUNTIES, MISS., BY C.E. RAMSER AND B.S. CLAYTON.

FLOW OF WATER IN THE MAIN DIVERSION FLOODWAY OF THE LITTLE RIVER DRAINAGE DISTRICT IN SOUTHEAST MISSOURI, BY C.E. RAMSER AND H. J. BARTZ.

INVESTIGATIONS PERTAINING TO RUN-OFF FROM FARM LAND IN MURRAY COUNTY, MINNESOTA, BY C. E. RAMSER.

F.O. BARTEL HAS SUBMITTED A PROGRESS REPORT ON SOIL EROSION EXPERIMENTS AT RALEIGH, N.C., WHICH WE EXPECT TO ISSUE SHORTLY IN MIMEOGRAPHED FORM.

P.T. SIMONS' MANUSCRIPT ON FARM DRAINAGE IN ALABAMA HAS BEEN SUBMITTED TO THE ALABAMA POLYTECHNIC INSTITUTION FOR PUBLICATION.

A MANUSCRIPT ON "NET REQUIREMENTS OF CROPS FOR IRRIGATION WATER IN MESILLA VALLEY, N.W.", BY D.W. BLOODGOOD, HAS BEEN APPROVED FOR PUBLICATION BY THE STATE OF NEW MEXICO.

C.D. KINSMAN HAS COMPILED A DIGEST OF "USE OF POWER ON FARMS" IN MULTIGRAPH FORM.

DEPARTMENT CIRCULAR 344 ON "EXTENSION WORK IN AGRICULTURAL ENGINEERING, 1923", BY GUY ERVIN, HAS BEEN ISSUED RECENTLY.

THE BUREAU OF RECLAMATION HAS ISSUED A PAMPHLET OF 50 PAGES ENTITLED "FEDERAL IRRIGATION PROJECTS", WHICH CONTAINS A BRIEF DESCRIPTION OF EACH FEDERAL PROJECT OF INTEREST CHIEFLY TO PROSPECTIVE SETTLERS.

